CLAIMS:

1. Formulation for reducing dentine sensitivity in the oral cavity, which incorporates at least one physical desensitising agent in form of a light curable monomer that forms a resilient polymer gel upon curing.

2. Dentine sensitivity reducing formulation that includes a light-cured, form-stable, resilient gel polymer.

3. The formulation of claim 1 or 2, including a light sensitive polymerisation initiator and (1) at least one multifunctional polymer, or (2) at least one multifunctional polymer and at least one monomer, or (3) more than one monomer.

4. The formulation of claim 3 in a suitable carrier liquid.

5. The formulation of claim 4, wherein the carrier liquid includes water.

6. The formulation of claim 4 or 5 having a viscosity to allow fluid migration into exposed dentinal tubules by capillary action.

7. The formulation of any one of the preceding claims, including a gel polymer that swells in the presence of moisture.

8. The formulation of any one of the preceding claims, wherein the gel polymer is permeable to oxygen and electrolytes.

9. The formulation of any one of claims 3 to 8, including a polycarboxylic acid polymer.

10. The formulation of any one of claims 3 to 9, including an acrylate or allyl derivative.

11. The formulation of claim 10, wherein the monomer is selected from the group consisting of 2-hydroxy ethylmethacrylate, glycol dimethacrylate, diallyloxyacetic acid, poly(ethylene glycol) dimethacrylate, 2-acrylamidoglycolic acid, acrylic acid, methacrylic acid, and itaconic acid.

12. The formulation of any one of claims 3 to 11, wherein the light sensitive polymerisation initiator is a quinone derivative in combination with a quaternary amine derivative.

13. The formulation of claim 12, incorporating camphorquinone and a quaternary amine derivative selected from the group consisting of N,N,3,5-tetramethyl aniline, poly(ethyleneimine), N,N,N,N–tetraethyldiethylenetriamine, and N,N–diethylethylenediamine.

14. The formulation of any one of claims 3 to 13, further including a preservative such as butylated hydroxy toluene or hydroquinone, in particular methyl hydroquinone.

15. The formulation of any one of claims 3 to 14, having the following constituents in % values by weight: Polycarboxylic acid polymer about 1 to about 50, 2-hydroxy ethylmethacrylate about 10 to about 80, Glycol dimethacrylate about 1 to about 50, Water about 1 to about 70, Camphorquinone about 0.01 to about 5, Tetramethyl aniline about 0.01 to about 5, and Butylated hydroxy toluene about 0.01 to about 5.

16. The formulation of claim 15, wherein the constituents are present in the following amount in % by weight: Polycarboxylic acid polymer about 5 to about 15, 2-hydroxy ethylmethacrylate about 50 to about 80, Glycol dimethacrylate about 3 to about 9, Water about 5 to about 25, Camphorquinone about 0.1 to about 1, Tetramethyl aniline about 0.1 to about 1 and Butylated hydroxy toluene about 0.01 to about 0.1.

17. The formulation of claim 16, wherein the constituents are present in the following amounts:

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|---|---|
| Polycarboxylic acid polymer | about 7.5% by weight |
| 2-Hydroxy ethylmethacrylate | about 74.5% by weight |
| Diallyloxyacetic acid, sodium salt | about 6% by weight |
| Water | about 12% by weight |
| Camphorquinone | about 0.2% by weight |
| Tetramethyl aniline | about 0.22% by weight |
| Butylated hydroxy toluene | about 0.05% by weight |

18. A method of preventing or reducing sensitivity or pain in teeth, which method includes applying a formulation in accordance with any one of claims 1 to 17 to exposed dentinal tubules of teeth, allowing said formulation to migrate into the tubules, and curing the formulation by application of light with a wave length in the range of 300 to 650nm, whereby soft resilient gel plugs are formed within the tubules.